## I. AMENDMENTS

**Amendments to the Specification**

Please amend the following paragraphs of the Specification as follows:

Please amend page 1, second full paragraph as follows:

An electroluminescence, hereinafter, which may be referred to as an "EL" ~~simply~~herein, material is known as one of light emitting materials. Various types of EL light emitting sheets have been developed and put to practical use. The EL light emitting sheet is generally formed by laminating a first electrode, a light-emitting layer, an insulating layer, i.e., a light reflecting layer, a second electrode and a protective layer (top coating layer) in order. Generally, by applying an alternating voltage (AC voltage) between the fist electrode and the second electrode, a fluorescent material in the light-emitting layer emits light.

Please amend page 1, third full paragraph extending over to page 2 as follows:

As another type of EL light emitting sheet, one having peculiar operation and effects is known (see, for example, Patent Document 1: Japanese Patent Laid-Open Publication No. Hei 8-153582). The EL light emitting sheet is formed by laminating an electrode section, an insulating layer and a light-emitting layer in order. The electrode section includes a plurality of electrode pairs each of which ~~have~~has a first electrode and a second electrode, which are formed like a comb. Then, an electrically conductive material in arbitrary shape is formed on the light-emitting layer as a film and the film is dried to be formed as a display electrode. Thereby, the parts in the light-emitting layer on which the display electrode is formed as a film emit light. In the EL light emitting sheet, a display electrode having a shape corresponding to the taste of a user can be formed, and then a desired light emission shape can be obtained.

Please amend page 2, first full paragraph as follows:

However, in the EL light emitting sheet disclosed in Patent Document 1, there is a problem in increasing luminance. To increase the luminance, it is required to increase the capacity of a converter or an inverter that converts direct current into alternating current in a ~~type~~

~~of using a~~device powered by direct current ~~power supply for driving~~.

Please amend page 2, third full paragraph extending over to page 3 as follows:

An object of the invention is to provide an EL light emitting device which can increase the luminance by a structure of an EL light emitting sheet.

Please amend page 4, first full paragraph as follows:

According to the electroluminescence light emitting device, since the top coating layer contains the compound additive containing dielectric, an electric field can be easily formed in the top coating layer when an alternating voltage (AC voltage) is applied between the first and second electrodes. Thus, it is possible to increase the luminance in the EL light emitting device.

Please amend page 10, seventh full paragraph as follows:

FIG. 6 is a plan view showing the external shape of the electrode pattern according to variation ~~7~~6 of the EL light emitting sheet;

Please amend page 10, eighth full paragraph as follows:

FIGS. 7A, 7B and 7C show the electrode sections (electrode layers) according to variation ~~8~~7 of the EL light emitting sheet schematically;

Please amend page 12, third full paragraph extending over to page 13 as follows:

FIGS. 2A and 2B are schematic plan views showing a part of the electrode layer 12. The electrode layer 12 of FIG. 1 shows the cross section of the electrode layer 12, taken along

the A-A' line of FIGS. 2A and 2B. As shown in FIG. 2A, first electrodes 12a, 12a, ... and second electrodes 12b, 12b, ... are formed to have a comb-like pattern shape severally, and they are formed to be engaged with each other with a predetermined gap between their teeth with putting a spacing region between each tooth so that each tooth does not touch each other. Since each of the first electrodes 12a, 12a, ... is electrically connected with one another, each of them has the same electric potential. Since each of the second electrodes 12b, 12b, ... is also electrically connected with one another similarly, each of them has the same electric potential.

Please amend page 15, first full paragraph as follows:

The gap S1 between the first electrode 12a and the second electrode 12b which are next to each other may be, for example, about 0.1-2.0 mm, and the width S2 of the first electrode 12a and the second electrode 12b themselves may be, for example, about 0.1-5.0 mm, which are enough for light emission only. However, when taking into account the case of placing a chart for light emission, of a thin line which is approximately parallel to the extending direction of comb-shaped pattern electrode, or a dot-shaped chart for light emission, the gap between the first electrode 12a and the second electrode 12b which are next to each other is preferably about 0.2-0.3 mm, and the widths of the first electrode 12a and the second electrode 12b themselves are preferably about 0.2-0.5 mm.

Please amend page 15, third full paragraph as follows:

When the gap between the first electrode 12a and the second electrode 12b is less than 0.2 mm, there is a large possibility that a light emission (spontaneous emission) which is not negligible is also created in ~~also~~ a region onto which no conductive material 30 is placed. When the gap is more than 0.3 mm, particularly, in a case of placing a chart of a thin line, flecks

of light emission stand up. Under conditions, that is, EL sheet with a light emitting region of 140mm x 92mm, starting voltage of 250V to 270V and current of 100mA to 130mA, luminance of emitted lights from two EL light emitting sheets which have gaps of 0.2mm and 0.15 mm, respectively, were compared. As a result, the luminance of emitted lights from the EL light emitting sheet having the gap of 0.2mm was 3±0.5 candela and that of 0.15 mm was 6±0.5 candela which was approximately twice that of 0.2mm gap case. Therefore, it is considered that when assuming a regular use condition in an ordinary room as an industrial product, the luminance of emitted light, of 3±0.5 candela which is obtained by the gap of 0.2mm is a lower limit.

Please amend page 16, first full paragraph extending over to page 17 as follows:

On the other hand, when the width sizes of the first electrode 12a and the second electrode 12b themselves are less than 0.2 mm, there are problems that the luminance of emitted lights may be lowered and the productivity may deteriorate by bridge or disconnection, occurreding in mass production. When the width sizes are more than 0.5 mm, there is a problem that in a case of placing a dot-shaped chart for light emission by using a pen for drawing a thin line, a probability of AC electric field formation with another electrode is lowered because the thin chart may be within the width of one electrode. When the width sizes are not more than 0.5 mm, the probability of an AC electric field formation with another electrode is increased because the probability of the placed dot-shaped chart being out of the one electrode is much larger than that of the chart being placed at the center of the one electrode.

Please amend page 18, fourth full paragraph extending over to page 19 as follows:

The EL light-emitting layer 14 is made of organic or inorganic EL light-emitting elements

sealed with a sealing resin. The EL light-emitting elements are fixed ~~with~~by being dispersed in a transparent resin binder. As the resin binder, a resin having a high dielectric constant such as a polyester resin or the like may suitably be selected. It is preferable that a material for forming the EL light-emitting layer 14 contains a compound additive containing dielectric.

Please amend page 21, first full paragraph extending over to page 22 as follows:

Since the main object of providing the top coating layer 15 is, as described above, to smooth the surface of the EL light-emitting layer 14 and to improve the removability of conductive material ~~out of~~from the surface thereof, the thickness of the top coating layer 15 is enough to be a degree which makes it possible to attain the object. On the other hand, it is suitable that the top coating layer 15 is as thin as possible. The reason for this is that the more the thickness is, the more the luminous intensity of the EL light emitting sheet 10 decreases. The thickness is practically preferable to be about 1-2 μm as the effective value. Hereupon, the "effective value" means the size of the thickness of the top coating layer 15 placed on the uppermost part of the EL light-emitting layer 14. It is sufficient for obtaining the thickness of about 1-2 μm as the effective value to make the coating value of the thickness about 5-8 μm. Hereupon, the "coating value" means the thickness of the protection layer 15 when the coating is performed on a surface having no irregularities.

Please amend page 22, first full paragraph as follows:

The top coating layer 15 may be formed by gluing a film-like or sheet-like member fixedly onto the EL light-emitting layer 14, or by placing a flexible material member thereto closely. For forming the top coating layer 15, a hardening accelerator is preferably added. For example, a CARE 101 (made by SEIKO ADVANCE Ltd.) may be used as the hardening

accelerator. It is preferable to add the hardening accelerator of 2-3 % (preferably 2 %) by weight of the ink composition and the curing agent. In choosing a hardening accelerator, it should be considered that the hardening accelerator has a high chemical affinity with a material of the top coating layer 15, little negative effects on the EL light-emitting layer 14 beneath the top coating layer 15, and a high hardening power.

Please amend page 24, third full paragraph extending over to page 25 as follows:

Then, by the attachment of the electrically conductive material 30, an AC electric field is formed in the EL light-emitting layer 14, and only the portion thereof just under the attached electrically conductive material 30 emits light locally. That is, since the EL light-emitting layer 14 has a high dielectric constant, a circuit composed of the first electrode 12a, the EL light-emitting layer 14, the electrically conductive material 30, the EL light-emitting layer 14, the second electrode 12b and the like is formed to create an AC electric field in the EL light-emitting layer 14. Then, the portion of the EL light-emitting layer just under the attachment part of the electrically conductive material 30 emits light. On the other hand, the intensity of the AC electric field at the ~~rest~~remaining portion of the EL light-emitting layer 14 just under the part where the electrically conductive material 30 is not attached is insufficient for the EL light-emitting layer 14 to emit light, and consequently the ~~rest~~remaining portion does not emit light. The thickness and the dielectric constant of the EL light-emitting layer 14 or the like are set in order that the portion of the EL light-emitting layer just under the attached electrically conductive material 30 may emit light selectively.

Please amend page 25, second full paragraph extending over to page 26 as follows:

According to the present embodiment, an AC electric field is formed at the portion of the

EL light-emitting layer 14 just under the attached electrically conductive material 30, and only the portion locally emits light. ~~This thing indicates that~~Thus, when the electrically conductive material 30 is attached to the top coating layer 15 ~~in the same pattern~~ as a desired pattern, a light emitting with the desired pattern can be obtained. Consequently, an EL light emitting sheet 10 with which a user can easily produce a desired light emitting pattern can be provided.

Please amend page 29, second full paragraph extending over to page 30 as follows:

When a predetermined voltage (AC voltage) is applied to each of the electrodes 71a-76a, each of the electrode pairs 71-76 takes the state capable of forming a closed circuit. To put it more concretely, when the electrically conductive material 30 is coated on the drawing ~~screen~~region 61 while the voltage is applied to all of the electrodes 71a-76a, a closed circuit is formed between the electrically conductive material 30 and an electrode pair at any place on the drawing screen 61 through the EL light-emitting layer 14 and the like. However, when the voltage is applied to only a part of the electrodes 71a-76a, only the part of the electrode pair corresponding to the electrode to which the voltage is applied can form a closed circuit (the sate may be referred to as a "closed circuit formation possible state", and a state other than the above-mentioned state may be referred to as a "closed circuit formation impossible state" in the present specification).

Please amend page 30, second full paragraph extending over to page 31 as follows:

In a case of putting on (placing, adhering, applying or the like) a conductive chart for light emission, of a thin line which is approximately parallel to the extending direction of a comb-shaped pattern electrode, or in a case of putting on a dot-shaped conductive chart for light emission, the gap S1 of about 0.2-0.3 mm between the first and second electrodes, which are

next to each other, is preferable, and the widths S2 of the first and second electrodes themselves, of about 0.2-0.5 mm, are preferable ~~from~~for the same reasons described above.

Please amend page 31, first full paragraph as follows:

FIG. 5 is a functional block diagram of the drawing board 50. In the figure, the drawing board 50 is provided with a control unit 110 composed of a central processing unit (CPU), a random access memory (RAM), a read only memory (ROM) and the like, a battery 130 composed of dry cells, and a voltage application unit 120. The voltage application unit 120 includes an inverter circuit 121 for converting a direct-current (DC) voltage supplied from the battery 130 to an AC voltage, and a booster circuit (not shown). The voltage application unit 120 applies an effective AC voltage of about 100-300 V between the earth line 70b of the electrode pattern 70 and each of the electrode pairs 71-76 according to a control signal input from the control unit 110.

Please amend page 32, third full paragraph extending over to page 33 as follows:

The entirely blinking mode is a mode in which a voltage is applied to all of the electrode pairs 71-76 simultaneously and intermittently. In other words, the mode is one in which all of the electrode pairs 71-76 simultaneously take the closed circuit formation possible state or the closed circuit formation impossible state alternately at predetermined time intervals. If the electrically conductive material 30 is coated ~~on~~ all over the drawing region 61, the whole surface of the drawing region 61 intermittently emits light.

Please amend page 33, first full paragraph extending over to page 34 as follows:

The sequentially light-emitting mode is a mode in which a voltage is accumulatively applied to the electrode pairs 71-76 in the order of their arrangement. In other words, the mode is one in which the electrode pairs 71-76 which have been in the closed circuit formation impossible state sequentially become the closed circuit formation possible state at predetermined time intervals. If the electrically conductive material 30 is coated ~~on~~ all over the drawing region 61, an area ~~part~~ corresponding to each of the six electrode pairs sequentially emits light (since there are six electrode pairs), and the area emitting light gradually increases. After all of the electrode pairs have become the closed circuit formation possible state, the application of the voltage to all of the electrode pairs 71-76 is stopped after a predetermined time to make all of the electrode pairs 71-76 be in the closed circuit formation impossible state. Thereby, the electrode pairs 71-76 return to the initial state, and the execution of the sequential light-emitting is repeated.

Please amend page 34, first full paragraph as follows:

The wavy light-emitting mode is a mode in which a voltage is intermittently applied to the electrode pairs 71-76 in the order of their arrangement. In other words, the mode is one in which each of the electrode pairs 71-76 repeatedly transits the closed circuit formation possible state and the closed circuit formation impossible state with a predetermined time lag. If the electrically conductive material 30 is coated ~~on~~ all over the drawing region 61, each area ~~part~~ corresponding to each of the six electrode pairs sequentially emits light and does not emit light, and consequently the parts emitting light operates to appear as if they were moving while waving.

Please amend page 34, second full paragraph as follows:

As described above, in the drawing board 50, it is possible to draw a light emitting chart

by applying the electrically conductive material 30 easily with the highlight pen 53. Moreover, it is also possible to remove the coated electrically conductive material 30 easily. Consequently, the repeat~~in~~ged drawing of charts for light emitting can easily be realized.

Please amend page 34, third full paragraph extending over to page 35 as follows:

Furthermore, a plurality of electrode pairs ~~are~~is formed in the EL light emitting sheet, and the control unit 110 controls the execution of the voltage application to each electrode pair. Thereby, light-emitting modes for light emitting charts can variously be changed, which makes it possible to realize interesting light emission together with the aid of the variation of the places where the electrically conductive material 30 ~~are~~ coated.

Please amend page 35, second full paragraph as follows:

Although in the EL light emitting sheet 10, 51, the waterproof layer 13 is arranged between the electrode layer 12 and the light-reflecting layer 16, the waterproof layer 13 is arranged between the light-reflecting layer 16 and the EL light-emitting layer 14 in variation 1. Other structure is ~~as~~the same as the EL light emitting sheet 10 or 51.

Please amend page 36, first full paragraph as follows:

In variation 2, the EL light emitting sheet has a structure in which the base layer 11, one of first and second electrodes 12a and 12b, the waterproof layer 13, the other of first and second electrodes 12a and 12b, the light-reflecting layer 16, the EL light-emitting layer 14 and the top coating layer 15 are laminated in this order. Other structure is ~~as~~the same as the EL light emitting sheet 10 or 51. The light-reflecting layer 16 may be omitted.

Please amend page 36, second full paragraph as follows:

In variation 3, the EL light emitting sheet has a structure in which the base layer 11, one of first and second electrodes 12a and 12b, the light-reflecting layer 16, the waterproof layer 13, the other of first and second electrodes 12a and 12b, the EL light-emitting layer 14 and the top coating layer 15 are laminated in this order. Other structure is ~~as~~the same as the EL light emitting sheet 10 or 51.

Please amend page 36, third full paragraph extending over to page 37 as follows:

Variation 4 is one that a further change is given to the EL light emitting sheet 10 or 51 according to the embodiment, or one of variations 1-3. The EL light emitting sheet according to the variation 4 has a structure in which the EL light-emitting layer 14 and/or the light reflecting layer 16 has a permeation prevention function to water or the like, instead of or in addition to the waterproof layer 13. Other structure is ~~as~~the same as the EL light emitting sheet 10 or 51.

Please amend page 37, first full paragraph as follows:

The EL light-emitting layer 14 with the permeation prevention function is composed of, for example, ~~an~~ organic or inorganic EL light-emitting elements being phosphor particles or phosphorescent particles, and a transparent resin binder for fixing the EL light-emitting elements in the state of being dispersed. The variation 4 uses a resin having a waterproof property or a moisture-proof property as the resin binder. The following resins ~~are~~can be used. That is, the resins are, for example, ~~for example,~~ a fluorocarbon resin such as a 4-fluorinated ethylene resin, fluororubber and the like; a silicon resin such as silicon rubber and the like; the other epoxy

resins; an acrylic resin; a urethane resin; a polyester resin; and a resin having a high sealing property such as an ethylene-vinyl acetate copolymer and the like. These resins are cured by a method such as the UV curing, the IR curing, the two-liquid curing, the heat curing and the like.

Please amend page 37, third full paragraph extending over to page 38 as follows:

Further, as the resins constituting the light-reflecting layer 16 having the permeation prevention function, the following resins having the waterproof property or the moisture-proof property ~~are~~can be used. The resins are, for example, a fluorocarbon resin such as a 4-fluorinated ethylene resin, fluororubber and the like; a silicon resin such as silicon rubber and the like; the other epoxy resins; an acrylic resin; a urethane resin; a polyester resin; and a resin having a high sealing property such as an ethylene-vinyl acetate copolymer and the like. These resins are cured by a method such as the UV curing, the IR curing, the two-liquid curing, the heat curing and the like.

Please amend page 39, first full paragraph as follows:

The configuration is used in the case where the EL light emitting sheet is incorporated in a case body or the like. In the case where the EL light emitting sheet is incorporated in the case body as described above, the back surface side is generally sealed not to be exposed. Consequently, it is needless to consider the ~~attachment of~~exposure to water and the like from the back surface side. If necessary, it is enough to coat the exposinged electrodes with a resin having the permeation prevention function, or to perform ~~the~~an alumite processing of the exposinged electrodes.

Please amend page 39, second full paragraph as follows:

Although the first electrode 12a and the second electrode 12b are provided on the back surface of the substrate sheet in the variation 5, the first electrode 12a and the second electrode 12b may be provided with ~~putting~~ the substrate sheet between them.

Please amend page 40, first full paragraph extending over to page 41 as follows:

Furthermore, owing to the arrangement of the earth line 700b between the upper row electrode pairs and the lower row electrode pairs of the two rows, the gap of the upper row electrode pairs and the lower row electrode pairs can be narrowed. That is, if a displacement side electrode 710a is arranged between the upper row electrode pairs and the lower row electrode pairs of the two rows, it is impossible to connect the upper row electrode 710a and the lower row electrode 710a ~~cannot connected with each other~~, and then it is necessary to arrange them with a predetermined space between them. Consequently, the gap between the upper row and the lower row of the two rows becomes wide, and the gap becomes clear in some light emission patterns. On the other hand, if the earth line 700b is arranged at the center, it becomes possible to remove, or at least to reduce, the defect as above.

Please amend page 43, second full paragraph extending over to page 44 as follows:

By forming an EL light emitting sheet by the use of the electrode section 800, and by performing selection control of the electric potential lines to which predetermined voltages (AC voltages) are applied, regions in the closed circuit formation possible state or in the closed circuit formation impossible state can arbitrarily be controlled. For example, in a case that the electrically conductive material 30 is coated all over the drawing screen, it is possible to emit light, i.e., to change the light emission form, so that arbitrary characters or charts are ~~raised~~lit up. Moreover, it is also possible to realize various light emission patterns such as enlargement of the

area of parts emitting light in concentric circles.

Please amend page 47, first full paragraph as follows:

(1) It is preferable to contain organic or inorganic colored pigment in the waterproof layer 13 of the EL light emitting sheet, to make the electrode pattern invisible from the front side by coloring. Such coloring ~~enables~~ not only ~~making~~renders the electrode pattern invisible from the front side but also widen~~ings~~ the range of choice for design from the front side. In a case of providing the light-reflecting layer 16, it is required to arrange the light-reflecting layer 16 near the EL light-emitting layer 14 in comparison with the waterproof layer 13.

Please amend page 49, third full paragraph extending over to page 50 as follows:

In the ink used for the top coating layer, the ratio of the urethane-based ink and the H Curing Agent is changed to 4 : 3, and the top coating layer is formed by the silkscreen printing and dried. The method of lamination up to the EL light-emitting layer is carried out by the same method ~~same~~ as the above-described one.